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COMMENTS ON INTERIOR'S SURFACE MINING REGULATIONS.(U)
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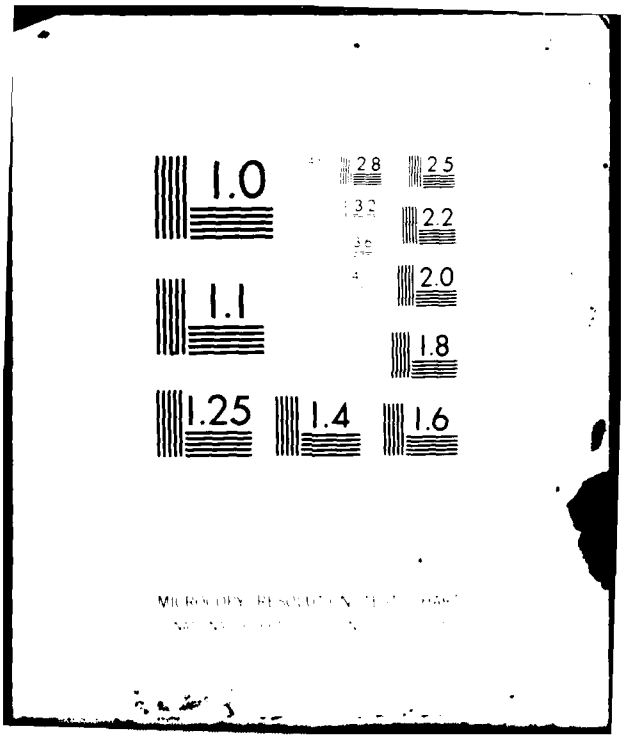
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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION

B-203769

AUGUST 5, 1981

The Honorable James G. Watt
The Secretary of the Interior

Dear Mr. Secretary:

Subject: Comments on Interior's Surface Mining Regulations (~~CED-81-145~~)

The General Accounting Office has been reviewing the Office of Surface Mining Reclamation and Enforcement (OSM), Department of the Interior, regulations implementing the Surface Mining Control and Reclamation Act of 1977 (Public Law 95-87). We initiated this review to follow-up on our September 21, 1979, report entitled "Issues Surrounding the Surface Mining Control and Reclamation Act" (CED-79-83) and because of congressional, State, industry, and public interest and controversy in controlling and reclaiming coal surface mined areas.

OSM is in the process of making major revisions to its regulations and we, therefore, do not plan further work at this time. However, during our regulatory analysis of seven regulations and discussions with various officials, we identified issues which we are suggesting OSM consider while revising its regulations.

--In 1978 OSM promulgated detailed design standards regulating the use of explosives to free the overburden from coal seams. According to many sources, studies on blasting's effects do not support OSM's proposed final regulations. In view of these studies OSM needs to review its support for its revised blasting regulations. Also, a legislative change may be needed to clarify the act's blast damage provision, which does not allow any building structure damage off the mine permit area. Some damage may be inevitable from blasting and overly stringent regulations could be excessively costly. (See pp. 6 and 7.)

--Before the act, some coal lands previously mined were degrading the environment because States did not require adequate financial protection when coal operators failed to complete reclamation work. The act and OSM's regulations changed this by requiring coal mine operators to

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obtain bonds guaranteeing that mined areas will be reclaimed. However, small operators are experiencing problems obtaining performance bonds from bonding companies because the companies object to certain provisions of the act, such as those relating to the bond's duration and amount. The act allows for alternatives to bonding such as a State reclamation fund. Based on our talks with West Virginia and Pennsylvania officials, alternatives appear attractive because they do not require bonding companies' participation and can provide for other short- and long-term environmental benefits addressed by the act. Overemphasizing bonding programs may create economic hardship for the small operator and inadequate funding for reclamation of coal mined lands. OSM needs to emphasize alternatives to bonding while revising its regulations. (See pp. 8 to 10.)

--The act provides an exemption (grandfather clause) for coal mine operators mining prime farmlands, provided they were mining them at the time the act became law. In May 1980, the U.S. Appeals Court for the District of Columbia issued a decision which might be viewed as allowing a coal operator with a preexisting permit to continue mining along a seam by buying or leasing coal rights without complying with the prime farmland provisions because of the exemption. In addition, our previous report showed that State and local land-use laws may reduce the possibility that prime farmland will be farmed following reclamation. Legislative changes may be needed to preserve prime farmlands by limiting the grandfather clause and land-use options. (See pp. 10 and 11.)

--Unchecked sediment (runoff) from coal mining operations can pollute and severely damage fish, water supplies, recreational areas and increase flood frequency. OSM developed design standards, including requiring coal operators to use sediment ponds to meet a uniform water quality performance standard. However, we believe these design standards do not adequately address the differing climatological, geological, and topographical conditions of each coal mining area and thereby limit State and coal mine operator flexibility in controlling sediment. Several Federal studies have raised questions about the need for and specific size of sediment ponds. Also, decreasing a stream's natural sediment level to meet a uniform water quality standard may adversely affect the stream by causing erosion damage. The State regulatory authority could be allowed to decide, on a site-by-site basis, the best

method of controlling sediment without exceeding a stream's natural sediment level. (See pp. 12 and 13.)

--Coal mining generates acid water, which is extremely hazardous when discharged into waterways. Therefore, the act attempted to prevent such discharge by prohibiting entering a coal seam at a lower portion of the slope and mining in an upward direction. However, the prohibition may cause, rather than prevent, acid water drainage by increasing water pressure elsewhere in the mine causing acid water discharges. West Virginia and Pennsylvania officials told us that a site-by-site analysis appears needed to prevent acid water drainage regardless of mining method. A legislative change would be needed to eliminate the prohibition. (See pp. 13 and 14.)

--The overall thrust of the act's and OSM's excess spoil standards is to prevent haphazard dumping of spoil material, especially into valleys, which causes erosion, acid drainage, landslides, and water quality problems. However, the standards appear to unnecessarily limit the coal operators' flexibility while providing little additional environmental protection. According to a study done for the Bureau of Mines, operators could use other than OSM methods in providing environmentally safe valley fills. For instance, controlled dumping over a cliff could be as safe as truck hauling into valley fills at less cost, but is prohibited by OSM regulations.

When revising its regulations, OSM needs to consider allowing alternative methods, if environmentally sound, in disposing of excess spoil material. If not possible by regulation, then legislative changes would be needed. (See pp. 14 to 16.)

--Access roads to coal mines can cause severe environmental damage and need to be regulated. However, OSM attempted to do so by promulgating numerous design criteria for constructing, maintaining, and eliminating the roads. These regulations may not be needed because coal operators already have to comply with numerous other OSM regulations controlling the major environmental hazards of coal roads. When revising the road regulations, OSM needs to be cognizant of regulatory redundancy to prevent regulating mine operators unnecessarily. (See pp. 16 and 17.)

Another matter for your consideration is whether OSM and the States have the monitoring, inspection, and enforcement resources to ensure compliance with the act's and OSM's regulations. Once

OSM has approved their programs, the States will have primary responsibility for inspection and enforcement with OSM having oversight responsibility.

According to the Assistant Director, Technical Services and Research, OSM, the regulatory revisions will give the States and coal operators greater flexibility in meeting the act's environmental objectives. However, regulatory flexibility requires better trained inspectors and may involve a greater number of inspectors to ensure compliance. OSM is planning to reduce its number of inspections, and inspection and enforcement resources in several States may be inadequate. We believe a balance should be maintained between regulatory flexibility and effective monitoring, inspection, and enforcement. Without this balance, coal operators may be put out of business from excessive regulations, resulting in reduced coal production or, conversely, the environment could be severely damaged because of inadequate enforcement.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to determine if key regulations provided adequate environmental protection while allowing States and coal mine operators sufficient flexibility to choose the appropriate methods necessary to achieve the act's environmental goals at the least cost.

Our review consisted of interviewing officials of four State natural resource agencies (Colorado, Pennsylvania, West Virginia, and Wyoming), four coal associations, two coal companies, two environmental groups, one bonding association, the National Academy of Sciences, the Environmental Protection Agency, the Bureau of Mines, and OSM. During our review we also (1) analyzed technical data supporting surface mining regulations and responses to proposed regulations, (2) identified studies on cost/benefit analysis of environmental regulations and selected surface mining regulations, (3) reviewed the legislative history to determine the intent of the surface mining act, and (4) reviewed pertinent records, documents, and books at Federal agencies. (See p. 18.)

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We appreciate the courtesy and cooperation extended to our staff during this review.

Sincerely yours,

Henry Eschwege

Henry Eschwege
Director

Enclosures - 2

SPECIFIC COMMENTS ON OSM SURFACE MINING REGULATIONS

BLASTING REGULATIONS

Blasting is necessary to free the overburden from the coal seam, but it can cause significant property damage. One study 1/ estimated that in 1975 improper blasting caused over $200 million in damage in the Midwest and Appalachia. In testimony before the Subcommittee on Energy and the Environment, House Committee on Interior and Insular Affairs, an official from the Center for Science in the Public Interest referred to another study which estimated property damage in Appalachia alone for 1965-75 at $1.5 billion.

To prevent blast damage, OSM promulgated in its regulations detailed design standards, including peak particle velocity 2/ and the distance to critical structures. Members of the industry, three States, and some environmental groups filed 22 complaints attacking the regulations in the United States District Court for the District of Columbia. The District Court rejected the attacks. Its decisions are reported as In re Surface Mining Regulation Litigation, 452 F. Supp. 327 (D.D.C. 1978) and 456 F. Supp. 1301 (D.D.C. 1978). The plaintiffs appealed. The Court of Appeals affirmed as to some of the regulations, reversed as to others, and remanded another issue for further proceedings in accordance with its opinion. (In re Surface Mining Regulation Litigation, 627 F.2d 1346 (D.C. Cir. 1980).) The peak particle velocity standard was found by the Court of Appeals to be unsupported by technical data and invalid because it was arbitrary and capricious. The distance regulations were found invalid because the act contains no provision authorizing the Secretary to prescribe distance limitations on blasting, but one section of the act does fix an explicit distance limitation.

OSM published revised blasting regulations for comment in the January 22, 1981, Federal Register. They included peak particle velocity standards partly based on a 1980 study done for the Bureau of Mines. The revised regulations recognize that some damage such as the loosening of old paint and lengthening of old cracks in buildings may occasionally occur.

1/Darcey, D., G. McMahon, E. Burns and B. Ulrickson "Strip Mine Blasting: A Study of Vibrational Pollution in the Eastern and Midwestern Coalfields" (1977).

2/Peak particle velocity is the speed at which geologic material is moved by the blast.

ENCLOSURE I

Industry, State, and environmental organizations criticized the revised regulations. Industry groups, including the Society of Explosives Engineers, the professional society of blasting experts, questioned the technical merits of the Bureau's report. Peabody Coal Company estimated the proposed regulations would increase its costs by $6.8 million without any significant environmental benefits. The Old Ben Coal Company said less than 10 firms nationwide had the expertise to comply with a portion of the regulations. An Illinois official said implementing the regulations would be so costly that it would be prohibitive.

The Illinois South Project, an environmental organization, contends OSM's blasting regulations are not consistent with the act's requirement that injury to persons and damage to property and water resources be prevented. According to the organization, OSM regulations cannot allow some threshold damage 1/ (cracks, loose paint, etc.) but must prevent it. Moreover, Illinois South discounts the usefulness of preblast surveys because, as OSM admits, they only document the buildings' structural condition visually apparent but do not analyze the structures' integrity to undergo stress and strain.

OSM is drafting revised blasting regulations to be completed by mid-July 1981. Final blasting regulations are to be published around January 1982. We suggest that OSM consider the following while developing new blasting regulations:

--Criticism of the studies supporting OSM regulations on technical grounds appears to indicate a need for more and better research. Additional research may be necessary on the effectiveness and cost of varying peak particle velocities and scaled distance factors. Research may also be needed on the impact of more powerful versus less powerful but more frequent blasts and the cumulative effects of continuous blasting over long periods of time.

--On the surface, OSM's proposed regulations published in the January 22, 1981, Federal Register, allowing some threshold blast damage, could reasonably be interpreted as conflicting with the act. Section 515(b)(15)(C) requires that injury to persons and damage to property be prevented. If some blast damage is inevitable or no blast damage is excessively costly to attain, OSM may want to ask the Congress to clarify the act's intent.

1/Threshold damage is the lowest level of blast damage; the others being minor and major blast damage.

BONDING REGULATIONS

While performance bonds have traditionally been required for mining operations, the bond amounts generally were not adequate to finish reclamation work abandoned by coal operators. Most States did not require sufficient bonding to complete the reclamation work. At least one State (Pennsylvania) did not even attempt to reclaim the land if the bond was inadequate. Also, unfinished reclamation work led to further environmental damage. To ensure the mined area will be reclaimed, the act requires bonds adequate for the State regulatory authority to complete the reclamation work.

With the more stringent requirements of the act and OSM regulations, bonding companies either stopped writing coal mining bonds altogether; limited their bonding to the larger coal operators; and/or required coal operators to pledge collateral, in some cases equal to the bond's face value, in addition to paying the bond premium. For over 2 years, OSM has been changing the bonding regulations to meet the bonding companies' objections. 1/ Yet as the Mining and Reclamation Council of America stated in a 1980 draft report, small- and medium-size operators are having an extremely difficult time obtaining bonds. In addition, a bond surety association official told us that no matter how the regulations are changed, small operators will continue to have problems obtaining bonds unless the act is changed.

The act does provide flexibility by allowing a State to implement an alternative system to bonding. The only alternative system we are aware of is a fund derived from a tax on coal production or permit application fees which may or may not be used with a bonding component. The fund is used by the State to complete unfinished reclamation work. To date, only West Virginia's program provides for an alternative system. West Virginia requires a $1,000 bond per acre and a reclamation fund derived from a 1-cent-per-ton tax on coal production.

In contrast, Pennsylvania requires a $4,000 per acre bond, and the bond amount will probably have to be doubled to comply with the act's bonding provisions. According to Pennsylvania's Department of Environmental Resources officials, requiring such a bond will put a number of small- and medium-size mine operators out of business.

1/Bonding companies dislike the act's sections concerning (1) the citizen's right to challenge bond release, (2) the State regulatory authority's right to increase the bond amount during the life of the bond, and (3) the bonding company's liability being extended to 5 to 10 years after mining operations cease.

The advantages of a separate fund with or without a bonding component are:

--State regulatory authorities can begin reclamation work quicker since the State regulatory authority will not have to wait for completion of legal action requiring the bonding company to pay off the bond. Pennsylvania's Department of Environmental Resources officials told us that it takes about 6 months to a year to complete the legal process, during which time severe environmental damage may occur at the mine site.

--Bonding companies might not be reluctant to participate in the program if it had a bonding component. Most, if not all, of the uncertainty associated with bonding under the act--bond duration, release, and amount--would be passed to the separate fund. West Virginia's Department of Natural Resources officials told us that bonding companies are willing to underwrite bonds in their State because of the State's fund.

--State regulatory authorities will not have to rely on the financial solvency of bonding companies to complete reclamation work. According to Pennsylvania's Department of Environmental Resources officials, funds were not available to reclaim a number of properties because a bonding company failed.

After evaluating the regulatory history of OSM's bonding regulations, it is apparent that OSM provided States little encouragement or incentive to adopt alternatives to bonding. Unless OSM takes an active role in encouraging States to use alternatives, the following may result:

--Small- and medium-size mining companies will be unable to operate without tying up significant financial resources.

--Lands for which bonds are forfeited after the act's passage (Aug. 3, 1977) and before the States implement their bonding programs, 1/ will not be fully reclaimed. The act provides funds only to reclaim lands abandoned before its passage and most States awaiting program approval do not require operators to bond to the full reclamation cost. Pennsylvania officials believe this will be a significant problem in their State.

--Mining's long-term effects will not be addressed. Once the bonding liability period runs out--5 to 10 years

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1/As of July 1981, the major coal-producing States have not implemented their bonding programs.

after mining ceases, which the bonding industry already believes to be too long--any subsequent environmental damage will probably go uncorrected. For instance, subsidence (land settling) problems might not be noticed for years after mining ceases. Funds will not be available to take care of such problems unless a fund is available.

PRIME FARMLAND REGULATIONS

The act and OSM regulations provide for preserving prime farmland 1/ while allowing coal operations to continue. Overall, the impact of surface mining for coal on the Nation's agricultural production capacity is going to be relatively small. About 100,000 acres of land are surface mined each year, and most of this land is eventually returned to some level of crop production through reclamation. Conversely, about 1 million acres of prime farmland are permanently removed from production annually--about 80 percent through urbanization and about 20 percent through inundation by water projects.

While the disturbance of land for coal mining is not a major factor in withdrawing land from agricultural production at the national level, in some rural counties essentially the entire area is underlain with strippable coal. Obviously, surface mining for coal could have tremendous impacts, both physical and social, in such areas.

The act's provisions and OSM regulations set forth numerous design criteria which must be met by coal operators. We did not evaluate whether the design criteria were necessary to meet the act's objective of preserving prime farmland. However, we did focus on the following areas as they apply to preserving prime farmland:

Coal operators exemption: Under the act, as interpreted by the U.S. Court of Appeals for the District of Columbia in May 1980, any mining operation with a permit approved before enactment of the act (grandfather clause) is excluded from the prime farmland provisions as long as the mining operation is the continued and contiguous operation of the same ongoing mine along its seam.

1/According to the U.S. Soil Conservation Service, prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oil seed crops, and also is available for these uses. It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed (including water management) according to acceptable farming methods.

(In re Surface Mining Regulation Litigation, 627 F.2nd 1346, 1362 (D.C. Cir. 1980).) Illinois, which has the most strippable coal reserves underlying prime farmland, has two heavily worked coal seams which are continuous. One seam has been mapped as being 42 or more inches thick throughout an area of 9,269 square miles underlying 55 counties. This decision might be viewed as allowing a coal operator with a preexisting permit to continue mining along the seam by buying or leasing coal rights without complying with the prime farmland provisions because of the exemption.

Our concern is that the prime farmland provisions may not be effective in preserving prime farmland and that the exemption provides a competitive advantage to a "grandfathered" coal operator who will not have to comply with the more costly regulations. A legislative change may be needed.

Preventing alternative land uses of prime farmland: The act requires that prime farmland be restored to 100 percent of its premined condition. This can be costly. AMAX Coal Company estimated that for four mines in Indiana they expended $27 million in 1978 and 1979 to purchase equipment and $8 million in additional annual operating costs to comply with the act's provisions. Further it is not certain that prime farmland can be returned to 100 percent of its premined condition. If it cannot, the act prohibits mining. In either case--restored or prohibited--the land can be used for purposes other than farming, thereby reducing the act's effectiveness.

Traditionally, governmental control of land use has centered at the State and local levels, and we are concerned with how the Federal Government can protect prime farmland from being lost to other land uses by requiring strict restoration or prohibiting mining entirely. In a previous report, "Preserving America's Farmland--A Goal The Federal Government Should Support" (CED-79-109, Sept. 20, 1979), we noted that State and local governments have had a limited impact in preventing farmland conversion to other uses.

Once lands have been returned to premined productivity or mining has been prohibited, the land can be used for any other purpose permitted by the State and local land-use laws. Without a comprehensive policy defining the national importance of retaining prime farmlands, the act's provisions can do little to prevent losing prime farmland. A legislative change may be needed.

SEDIMENT CONTROL REGULATIONS

Unchecked sediment from coal mining operations can severely damage fishlife, water supplies and recreational areas and increase flood frequencies. Therefore, the act requires mine operators to prevent--"to the extent possible using the best technology currently available"--adding sediment to streamflows. OSM regulations, however, went much further by requiring mine operators not only to build sediment ponds to control sediment but by telling operators how to build the ponds. Based on coal industry challenges and subsequent court rulings, some of these regulations were suspended.

Comments concerning the OSM regulations in the sediment control area question the applicability of a rigid set of national requirements to the climatological, geological, and topographical conditions existing in various mining areas. Those commenting recognize the importance of controlling sediment, but argue that design criteria do not adequately address the differing environment of each coal mining area. We suggest that OSM consider the following concerns in developing new sediment control regulations:

--The necessity for a sedimentation pond at all mines and, if necessary, what size the pond should be.

--The potentially adverse environmental effect of having sediment levels lower than those which occur naturally.

These concerns are discussed below and show the limiting effect of arbitrary criteria.

Pond necessity and size: OSM regulations requiring a sediment pond at all coal mines 1/ may be unnecessary and limit regulatory authority flexibility. According to OSM, requiring a sedimentation pond at all coal mines is necessary because the pond is part of the best technology currently available for controlling the effects of sediment on streamflow. However, in the environmental impact statement accompanying the regulations, OSM cited previous Department of the Interior studies which showed "excess sediment from mine activities was not found in small streams that were more than two miles from the mined area." If sediment does not reach a streamflow, why is a pond necessary? Nevertheless, OSM regulations would still require a sedimentation pond at a mine no matter the distance from a stream.

1/The regulations exempt mines with a small disturbed area.

We believe sediment ponds need to be considered as an option within a total sediment control system, with any pond needed being as small as possible to prevent the unnecessary disturbance of additional land. OSM sediment pond design criteria required the pond to be of sufficient size to detain the maximum amount of water expected from a 24-hour rainfall at any time during a 10-year period. However, the Environmental Protection Agency does not believe that information presently available allows tying sediment pond size criteria to a specific rainfall event. At this time, the Environmental Protection Agency is doing studies to help eliminate this information gap. In addition, there is the question of the rationale for using a 10-year/24-hour rainstorm requirement when the expected service life of the sediment pond may be less.

Potential adverse environmental consequences: Decreasing the natural sediment level entering a stream may cause downstream erosion. Therefore, by establishing uniform performance standards, OSM may be adversely affecting the environment. All streams have a level which keeps them in balance with the soil in the area. If the natural sediment level is reduced, the stream will compensate by eroding its banks and bottom until a sediment level is reached. In brief, the limits established by OSM regulations can cause erosion by decreasing the amount of sediment reaching a stream below that level which occurs naturally.

Even if stream erosion did not take place, we believe little is accomplished by changing a stream's sediment level during mining operations. At the conclusion of mining, the land is returned to approximately its premined state. The natural stream balance--since it is based on site-specific features such as geology, soils, and precipitation--will re-establish itself. In many areas of the country this natural sediment level will be in excess of the arbitrary limit imposed during mining. The regulatory authority should not have to enforce uniform criteria with the knowledge of potential degradation and the future return to higher sediment levels when mining ceases.

GRAVITY DISCHARGE OF ACID WATER

About 11,000 miles of streams in the United States have been contaminated by mine-generated acid water. To avoid such contamination, the act requires mine operators to locate mine openings in such a manner to prevent natural (gravity) drainage of acid water. According to OSM and industry officials, this means up-dip mining (entering a coal seam at a lower portion of the slope and mining in an upward direction) is prohibited.

Pennsylvania's Department of Environmental Resources officials disagreed, stating that the act only prohibited the gravity discharge of acid water. The officials believe that mine openings could be planned in an up-dip manner when mine sealings would prevent acid water discharge.

Based on OSM's response to West Virginia's regulatory plan, we do not believe OSM would agree with Pennsylvania's position. Under West Virginia's State law, the Director of the Department of Natural Resources is granted discretion to approve up-dip mining if necessary for safety and environmental reasons. Because OSM believes the act prohibits up-dip mining, it is requiring West Virginia to change its law before unconditionally approving its regulatory plan.

The OSM Region I Director and Pennsylvania and West Virginia officials we contacted all agree that a site-by-site analysis is the best way to prohibit discharge of acid water and the up-dip mining method may be needed in some cases to prevent acid water discharge. The key factor in the analysis is how to minimize pressure on mine seals and natural geological structures. Without such an analysis, acid water can break out from a mine anywhere, not just at the mine openings. According to West Virginia's Director, Natural Resources Department, several major breakouts of acid water have recently occurred even though down-dip mining was used. Several millions of dollars will be needed to prevent further acid damage.

It would seem that acid drainage from coal mines is a serious environmental problem which must be addressed before mining begins. Given the diversity in terrain, climate, and physical conditions, it would seem pertinent that a site-by-site evaluation be made of the best method to prevent acid drainage. In some cases up-dip mining may be a better method to control acid drainage. If OSM finds that up-dip mining may be appropriate but cannot approve this method because of the act, then OSM needs to seek a legislative change.

EXCESS SPOIL 1/ VALLEY FILL REGULATIONS

Before the act, excess spoil was haphazardly dumped over mountain sides causing erosion, acid drainage, landslides, sedimentation, and water quality problems as well as the potential for loss of lives and property damage. The act and subsequent

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1/Excess spoil is generated by expansion of overburden material beyond that needed to return the land to its approximate original contour and by mining, which removes mountain tops. Mountaintop spoil is usually placed in valleys or heads of hollows.

OSM regulations were designed to correct these problems and therefore called for specific standards concerning site selection, controlled placement, drainage, configuration, and design.

OSM promulgated design criteria regulations which limited the methods coal operators could use in disposing of excess spoil. Subsequently, OSM contracted with the National Research Council to evaluate alternative technologies and regulatory practices for the disposal of excess spoil from coal mines. The study is to be completed in late summer 1981.

Based on our regulatory analysis, we suggest that OSM consider the following concerns in revising excess spoil/valley fill regulations:

--Stability safety factor 1/ of valley fills should be based on a site-by-site evaluation rather than a 1.5 factor to prevent unnecessary design and construction costs as well as to provide better safety for the public.

In an October 1978 study done for the Bureau of Mines, engineers and consultants, Skelly and Loy, recommended a safety factor of 1.1 for fills in remote areas and a factor of 1.3 if failure of a fill could cause property damage. Others suggested safety factors of 1.7 or 1.8. OSM believes the added degree of protection by the 1.5 safety factor is warranted to protect the environment and offset the lack of long-term maintenance over the lifetime of the fill.

Better safety may be assured by leaving the appropriate safety factor up to the design engineer who would design on a site-specific basis. We believe in some cases this would result in cost savings and in other cases a higher degree of safety. However, provisions would have to be made to notify the public about valley fills, should land use be changed in the future.

--Transporting excess spoil from the mine pit to the dump site can be very expensive. Mine operators should be given sufficient flexibility to use controlled gravity dumping rather than truck hauling of excess spoil material when it is less expensive as long as it can be done in an environmentally sound way. According to Skelly

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1/According to the Chief, Bureau of Mines Reclamation and Process Waste Control, a stability safety factor of 1.0 means that all forces on the valley fill are in equilibrium and anything less is unstable.

and Loy and OSM's Region II Director, a site-by-site evaluation is necessary to do this.

--The act may be unnecessarily restricting appropriate structures (buttresses) to prevent landslides when the toe of the spoil area rests on a downslope. The act requires using only a rock toe buttress to stabilize valley fills. Skelly and Loy and OSM Region I officials disagreed with this restriction. Skelly and Loy stated such a blanket ruling could create rather than prevent stability problems, particularly in steep slope, thin, overburden conditions.

OSM's Region I Director stated that such a restriction is unnecessary and can result in additional costs to the mine operator. Both Skelly and Loy and the Region I Director recommend a site-by-site evaluation to determine the most effective way to stabilize fills, including using rock toe buttresses.

COAL ACCESS ROADS

Poorly constructed and maintained roads cause erosion, sediment, and dust from the disturbed areas. One study 1/ showed that about 10 percent of the total surface area disturbed by mining consists of roads. Recognizing the damage caused by roads, the act requires mine operators to control or prevent erosion and sediment; pollution of water; and damage to fish, wildlife, and public or private property. However, OSM regulations attempted to tell the mine operators how to meet these performance objectives by promulgating numerous design criteria for constructing and maintaining roads. In May 1980 the U.S. District Court for the District of Columbia ruled in a memorandum opinion that the road regulations were invalid based on a technicality--inadequate comment period. (In re Surface Mining Regulation Litigation, Civil Action 79-1144 (D.D.C. unreported opinion filed May 16, 1980).)

Our concern in this area is whether it is necessary to promulgate detailed design criteria to meet the act's performance objectives for roads. Other OSM regulations already address the problems associated with erosion, sediment, and water pollution. For instance, regulations already require coal operators to prevent to the extent possible adding sediment to streamflow thus requiring erosion, sediment, and water pollution controls to be in effect.

1/Grim, E.C. and Hill, R.D. "Environmental Protection in Surface Mining of Coal" (1974).

ENCLOSURE I

In revising the road regulations, OSM needs to be cognizant of regulations already promulgated to prevent unnecessarily regulating mine operators.

ENCLOSURE II

LIST OF ORGANIZATIONS CONTACTED DURING THE REVIEW OF SURFACE MINING REGULATIONS

Federal agencies

Office of Surface Mining Reclamation and Enforcement - Headquarters; Region I, Charleston, West Virginia; and Region V, Denver, Colorado
Environmental Protection Agency--Headquarters
Bureau of Mines--Headquarters

State agencies

Pennsylvania Department of Environmental Resources
West Virginia Department of Natural Resources
Wyoming Department of Environmental Quality
Colorado Department of Natural Resources

Coal Associations/Coal Companies

Mining and Reclamation Council of America--Washington, D.C.
Pennsylvania Coal Mining Association--Harrisburg, Pennsylvania
Western Pennsylvania Coal Operators Association--Pittsburgh, Pennsylvania
West Virginia Surface Mining-Reclamation Association--Charleston, West Virginia
Consolidation Coal Company--Pittsburgh, Pennsylvania
Atlantic Richfield Company--Denver, Colorado

Citizen organizations

Environmental Policy Institute--Washington, D.C.
Public Lands Institute--Denver, Colorado

Other organizations

The Surety Association of America--Iselin, New Jersey (telephone contact)
National Research Council--Washington, D.C.